

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-13, 16-26 and 29-48 are pending in the application, with Claims 1, 16, 29 and 39 being the independent claims. Claims 14, 15, 27 and 28 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. No new claims are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Examiner Interview

Applicants extend their appreciation to the Examiner for meeting with Applicants' counsel on November 10, 2004. During that meeting, Applicants' counsel explained the invention with a particular focus on independent claims 1 and 29. In particular, Applicants' counsel explained how a segment-level actual usage value for one or more word combinations can be determined, and also explained how a segment-level expected usage value for one or more word combinations can be computed.

Applicants' counsel demonstrated that U.S. Patent No. 6,678,694, entitled *Indexed, Extensible, Interactive Document Retrieval System*, issued to Zimmerman, et al. on Jan 13, 2004 ("Zimmerman Patent") and U.S. Patent No. 5,745,776, entitled *Enhanced Electronic Dictionary*, issued to Charles Sheppard, II on Apr. 28, 1998

("Sheppard Patent") did not render the claims of the present application obvious under 35 U.S.C. § 103(a).

The Examiner requested that Applicants' counsel identify the sections of the specification that explained actual usage value and expected usage value, as used in claim 1 and other claims.

Accordingly, paragraphs 24, 28, and 29 describe one method of determining a segment-level actual usage value for word combinations. Paragraph 24 indicates that statistics S1, S2, and S3 measure actual usage of words and word combinations. Specifically, paragraph 28 defines statistic S2 as a segment level frequency count for each word combination. Paragraph 29 provides one example of the determination of S2. Paragraph 29 explains that if a segment is defined as a paragraph, then the value of S2 for word combination-i is the number of unique paragraphs in a data corpus in which word-combination-i is found. Also, original claim 11 provides one embodiment for determining a segment-level actual usage value for a word combination.

Paragraphs 25, 26 and 32-34 describe one method of determining a segment-level expected usage value for word combinations. For ease of illustration, the discussion focuses on word combinations that have two words. Paragraph 32 notes that the expected usage value for a word pair combination can be computed as:

$$S1_{\text{word-i}} \times S1_{\text{word-j}}/N,$$

where $S1_{\text{word-i}}$ and $S1_{\text{word-j}}$ represent the S1 statistic for word-i and word-j respectively, and N represents the total number of segments in the data corpus being analyzed. Paragraph 33 notes that the above equation can be extended to word combinations that

have more than two words. Original claim 12 provides an example equation for computing the expected usage value for word combinations of any length.

Paragraph 24 describes how statistic S1 is computed. S1 is defined as a segment-level frequency count for a single word. Paragraph 26 explains that if a segment is defined as a paragraph, then the value of S1 for word-i is the number of unique paragraphs in a data corpus in which word-i is found. The S1 statistics are then used in the above equation to compute an expected usage value for a word combination.

The Examiner also requested that Applicants' counsel identify the sections of the specification that explained the phrase "result set" as used in claim 29 and other claims. Paragraph 37 explains the phrase "result set" and provides an example result set. Paragraph 37 notes that an initial result set is generated upon receipt of a user query. Paragraph 37 notes that, for example, a literal text search may identify 100,000 documents as a result set that contain a search term. Paragraph 41 also notes that if a user query includes multiple search words or a quoted phrase that a relatively small result set can be generated (e.g., 50 hits or fewer). These hits, for example, may be URLs associated with websites containing the search terms.

Applicants have provided these references to the detailed description by way of example and not limitation to aid the Examiner in his understanding of the invention as claimed.

Rejections under 35 U.S.C. § 103

Claims 1-7, 9-15 and 16-28 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the Sheppard Patent in view of the Zimmerman Patent. Claim 8 has

been rejected under 35 U.S.C. § 103(a) over the Sheppard Patent in view of the Zimmerman Patent and in further view of U.S. Patent No. 6,446,061, entitled *Taxonomy Generation for Document Collections*, issued to Doerre et al., on Sep. 3, 2002 ("Doerre Patent"). Applicants respectfully traverse these rejections and request reconsideration.

The Examiner states that the Sheppard Patent designates a word combination as a topic if the segment-level actual usage value of the word combination is substantially greater than the segment-level expected usage value of the word combination. Office Action at 3. Applicants respectfully disagree. The Examiner notes that the Sheppard Patent uses frequency counts and highest frequency ratings for storing topic words in a database and cites to col. 7, lines 42-67 and col. 8 lines 1-67 to support the Examiner's conclusion. However, the Sheppard Patent describes the uses of these frequency ratings to assign a difficulty rating to words based on the premise that if a word appears frequently in a data set, then its difficulty level of that word would be high. Sheppard Patent at Col. 8, Lines 31-49.

Thus, while the Sheppard Patent does measure the usage of words, this measure is used not to determine whether a word combination should be a topic, but rather to assign a difficulty level to the word within a particular topic. The Sheppard Patent, therefore, does not disclose, teach or suggest at least the element of designating a word combination as a topic if the segment-level usage value of the word combination is greater than the segment-level expected usage value of the word combination, as presently claimed by the Applicants.

Furthermore, the Zimmerman or Doerre Patents or the combination of the Sheppard, Zimmerman and Doerre patents do not teach, suggest or disclose this element.

Moreover, none of the references made of record by the Examiner alone or in combination teach, suggest or disclose this element.

For at least these reasons, Claim 1 as amended is patentable. Claims 2-13 depend upon claim 1. Because each dependent claim incorporates all of the elements of the independent claim from which it depends, as well as additional features, the above arguments apply *a fortiori* to the dependent claims. Thus, claims 2-13 are also patentable over the Sheppard Patent, Zimmerman Patent, Doerre Patent and other patents made of record.

Claim 16 also includes the element to designate a word combination as a topic if the segment-level actual usage value of the word combination is greater than the segment-level expected usage value of the word combination. For the reasons set forth above, Claim 16 is also patentable over the Sheppard Patent, Zimmerman Patent, Doerre Patent and other patents made of record.

Claims 17-26 depend upon claim 16. Because each dependent claim incorporates all of the elements of the independent claim from which it depends, as well as additional features, the above the above arguments apply *a fortiori* to the dependent claims. Thus, claims 17-26 are also patentable over the patentable over the Sheppard Patent, Zimmerman Patent, Doerre Patent and other patents made of record.

Claims 14, 15, 27 and 28 have been cancelled to expedite allowance of the remaining pending claims. Applicants expressly reserve the right to file a continuation application with claims addressing the methods and devices included in these claims. As a result of the cancellation of the these claims, Examiner's rejections with respect to these claims are rendered moot.

Claims 29-48 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the Sheppard Patent in view of U.S. Patent No. 6,038,560, entitled *Concept Knowledge Base Search and Retrieval System*, issued to Kelly Wical on Mar. 14, 2000 ("Wical Patent"). Applicants respectfully traverse and request reconsideration. Independent claims 29 and 39 have been amended herein to include an element stating that identifying those topics associated with the stored data items identified in the result set, wherein said topics are identified by any of the methods of claim 1, 6, 11 or 12.

Because claims 29 and 39 now include elements relating to the method of determining topics in claim 1, 6, 11, and 12, for the reasons discussed above with respect to claim 1, independent claims 29 and 39, as amended are patentable. Claims 30-38 depend upon claim 29. Claims 40-48 depend on claim 39. Because each dependent claim incorporates all of the elements of the independent claim from which it depends, as well as additional features, the above the above arguments apply *a fortiori* to the dependent claims. Thus, claims 30-38 and 40-48 are also patentable over the Sheppard Patent, Zimmerman Patent, Doerre Patent and other patents made of record.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will

expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "Michael D. Specht". The signature is fluid and cursive, with the first name "Michael" and last name "Specht" clearly distinguishable.

Michael D. Specht
Attorney for Applicants
Registration No. 54,463

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1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600